

Art Unit: ***

CLPMTO

Diane Williams

05/31/02

Claims 1-14 have been amended

1. **(Amended)** A method for production of proteins folded into their native or active structure, said proteins being from the family of G-protein-coupled receptors, comprising:
providing said protein solubilized in a first detergent, and
exchanging said first detergent for a second detergent, to induce folding of said protein in its native or active form, wherein said second detergent is selected from the group consisting of:
alkylglycosides, comprising unbranched, branched and cyclic C5-C12 alkyl chain, and glycoside, comprising monosaccharides and disaccharides; and
alkyl-phosphorylcholine with chain length of C10-C16.
2. **(Amended)** The method of Claim 1, wherein said second detergent is provided in a folding buffer with mixed lipid/detergent micelles.
3. **(Amended)** The method of Claim 2, wherein said folding buffer contains said second detergent and phospholipid from a natural source.

4. **(Amended)** The method of Claim 1, wherein said exchange of detergents is done by a dialysis- or ultrafiltration method.
5. **(Amended)** The method of Claim 1, wherein said exchange of detergents is carried out via a chromatographic method.
6. **(Amended)** The method of Claim 1, wherein said exchange of detergents is carried out by diluting said solubilized protein in a buffer which contains said second detergent.
7. **(Amended)** The method of Claim 1, wherein after said exchange of detergents at least one conserved disulfide bridge is formed in said protein.
8. **(Amended)** The method of Claim 1, wherein said folded protein is incorporated in proteoliposomes.
9. **(Amended)** The method of Claim 1, wherein said protein is produced in form of inclusion bodies in a cell line transformed with an expression vector which carries a gene coding for said protein.
10. **(Amended)** The method of Claim 1, wherein said protein is part of a fusion protein and is cleaved off from said fusion protein.
11. **(Amended)** The method of Claim 9, wherein said inclusion bodies are purified and, by adding said first detergent, solubilized.
12. **(Amended)** The method of Claim 1, wherein said first detergent is selected from the group N-Lauroylsarcosine, dodecylsulfate, other charged detergents or urea or guanidiniumchloride in combination with charged or uncharged detergents.
13. **(Amended)** The method of Claim 1, wherein said second detergent has a concentration that is above its critical micelle concentration.
14. **(Amended)** The method of Claim 1, wherein said second detergent is alkyl-phosphorylcholine with a chain length of C10-C16.

Claims 15 and 16 have been canceled

Claims 17 – 21 have been added

Art Unit: ***

17. (New) The method of Claim 3, wherein said phospholipid is a lipid extract of tissue in which said protein occurs naturally.
18. (New) The method of Claim 7, where the disulfide bridge is formed by adding a mixture of oxidized and reduced glutathione.
19. (New) The method of Claim 11, wherein said second detergent is alkyl-phosphorylcholine with a chain length of C10-C16.
20. (New) The method of Claim 12, wherein said second detergent is alkyl-phosphorylcholine with a chain length of C10-C16.
21. (New) The method of Claim 13, wherein said second detergent is alkyl-phosphorylcholine with a chain length of C10-C16.